

# Chromium-6

## Chromium-6 Questions and Answers

*(Updated August 23, 2013)*

### **What is chromium-6?**

Chromium-6, or hexavalent chromium, is a naturally occurring metal. It is also used in several industrial processes. There are other forms of chromium such as chromium-3, which is an essential nutrient and is sold as a dietary supplement.

### **What are the health effects of chromium-6?**

Chromium-6 has been known to cause cancer in humans when inhaled. In scientific studies in laboratory animals, chromium-6 has also been linked to cancer when ingested.

### **How does chromium-6 get into water supplies?**

Chromium-6 can occur naturally so it may be present in some groundwater aquifers. The types of rocks and soil associated with chromium-6 are known to occur in parts of Solano County. Chromium-6 can also reach water supplies from industrial uses such as stainless steel production, metal plating, and leather tanning.

### **Is there a drinking water standard for chromium-6?**

In August 2013, the [California Department of Public Health](#) announced a proposed maximum contaminant level (MCL) of 10 parts per billion (ppb) for chromium-6 in drinking water. One part per billion would be equal to adding one drop of water to an Olympic size (10,000 gallon) swimming pool. This proposed level is designed to protect public health and be feasible for water agencies to achieve.

The California Department of Public Health has released this draft MCL for a [45-day comment period](#) (ending October 11, 2013) during which members of the public may submit written feedback. The final MCL will be adopted following the public review and comment process which could be finalized at the end of 2013 or early 2014. When formally adopted, the MCL will be an enforceable regulatory standard that must be met by all public water systems within a specific timeframe.

California has had a drinking water standard of 50 ppb for total chromium for many years. This enforceable standard remains in effect for drinking water, even though a specific chromium-6 standard has not yet been adopted.

### **Has local water been tested for chromium-6?**

Solano Irrigation District tests water from our 9 public water systems for chromium-6. To date, it has not been detected in our treated surface water at or above 1 ppb. It has been detected in the groundwater systems SID-Stocking Ranch (non-detect), Dixon-Solano Water Authority (4 of 5 wells 15-26 ppb), SID-Elmira (1.2-2.8 ppb), and SID-Gibson Canyon (ND-3.1 ppb).

To better understand the occurrence of chromium-6 in groundwater, the district tested wells throughout Solano County between 2001 and 2004. As part of the California Dept. of Public Health's process to establish a drinking water standard, water providers all over the state have also tested their water supplies for chromium-6.

Sampling results from 2001 to 2012 indicate that the average level of chromium-6 detected in groundwater in Solano County is 1.7 ppb. The range of chromium-6 observed in groundwater varies from 1 ppb up to 29 ppb.

Results from 39 water supply wells in Solano County indicate that chromium-6 levels in 40 percent of the wells tested are below the proposed MCL.

**How do I know if my water meets the proposed drinking water standard?**

Water systems throughout the state have tested for chromium-6 and have reported the results to the California Dept. of Public Health. Those results can be accessed [here](#).

You can also contact the city or water company that provides your water for more [information](#).

If your water comes from a domestic well, you may want to test your drinking water for chromium-6. The water district recommends that you use a certified laboratory. For a list of local labs go to this [link](#).

**What if my water has chromium-6 above the proposed drinking water standard?**

Once the drinking water standard is formally adopted, it must be met by all public water systems. Public water systems with chromium-6 above the drinking water standard must work to achieve compliance, which may require treatment or blending of different water sources.

If your water comes from a private domestic well, you are not subject to state water quality regulations. To protect your health, you may want to consider treating your water if it contains chromium-6 (or any other substances) at levels above drinking water standards.

**Is there a filter that will remove chromium-6?**

The California Dept. of Public Health has a list of devices certified to reduce chromium-6 [here](#). However, the department does not specify how much reduction can be expected from each device.

To be sure a particular treatment system will work for your situation, the water district recommends that you talk to the manufacturer or the company installing the system.

**Is this the chemical that was the subject of the movie, “Erin Brockovich”?**

Yes, it is. In Hinkley, California, chromium-6 has been detected in monitoring wells at levels up to 7,800 parts per billion (ppb) due to industrial contamination.

The levels of chromium-6 observed in Hinkley are many times higher than what has been observed in Solano County, where the average level detected in groundwater is 13.94 ppb and the maximum is 29 ppb.

**Is chromium-6 found in bottled water?**

There is no chromium-6 standard for bottled water, so bottled water producers are not required to test for it. We suggest consumers contact bottled water producers directly for information about their product’s water quality.

**What is Solano Irrigation District doing to address this issue?**

1. We will continue to provide accurate information to the public.
2. We are coordinating with local water agencies to respond appropriately.
3. We are actively engaged in the state and federal process to establish a science-based drinking water standard for chromium-6.
4. We continue to monitor new science regarding chromium-6 and other unregulated contaminants.
5. We are expanding testing for chromium-6 with the latest, most accurate methods.